In the Claims:

1. (Currently Amended) ~~Control~~ A control circuit for a signal strength information dependent frequency response adaptation of an audio signal for an electrodynamic transducer ~~(4), with~~, the circuit comprising:

- a signal strength information determination means ~~(2,6)~~ for determining a signal strength information according to ~~the~~ a level of the audio signal, and
- a frequency modifying means [[(3)]] for ~~frequency~~ selectively modifying the audio signal in response to the signal strength information such[[,]] that the electrodynamic transducer [[(4)]] converts the audio signal into a low distortion sound signal for high levels of [[an]] the audio signal and ~~with~~ has a flat frequency response for low levels of [[an]] the audio signal,

~~whereby~~ wherein a lower frequency range of the audio signal is modified with a gain that is different [[to]] than a gain of a higher frequency range of the audio signal, and a cutoff frequency ~~(f_{g1}, f_{g2}, f_{g3}, f_{g4}, f_{g5})~~ separating the lower frequency range from the higher frequency range is shifted towards higher values for an increasing level of the audio signal and towards lower values for a decreasing level of the audio signal.

2. (Currently Amended) ~~Control~~ A control circuit according to claim 1, ~~characterised in that~~ wherein the modifying means [[(3)]] comprises a high-pass filter, the cut-off frequency ~~(f_{g1}, f_{g2}, f_{g3}, f_{g4}, f_{g5})~~ of which is shifted towards higher frequencies for increasing levels of the audio signal and is shifted towards lower frequencies for decreasing levels of the audio signal.

3. (Currently Amended) ~~Control~~ A control circuit according to claim 1 ~~or 2, characterised in that,~~ wherein the level of the audio signal is ~~defined~~ determined by a volume setting.

4. (Currently Amended) ~~Control~~ A control circuit according to claim 1 ~~or 2, characterised in that,~~ wherein the level of the audio signal is determined from a current

amplitude or from a current energy content of the audio signal with respect to ~~the~~ a full frequency range of the audio signal.

5. (Currently Amended) ~~Control~~ A control circuit according to claim 1 ~~or 2, characterised in that,~~ wherein the level of the audio signal is determined from a current amplitude or from a current energy content of a lower frequency range of the audio signal.

6. (Currently Amended) ~~Control~~ A control circuit according to claim 2, ~~characterised in that~~ wherein the cut-off frequency of the high pass filter is shifted proportional to ~~the~~ a square root of ~~the audio signal~~ a peak amplitude of the audio signal.

7. (Currently Amended) ~~Control~~ A control circuit according to claim 2, ~~characterised in that~~ wherein the cut-off frequency of the high pass filter is shifted proportional to ~~the~~ a square root of ~~the~~ a root mean square value of a frequency of the audio ~~frequency~~ signal.

8. (Currently Amended) ~~Control~~ A control circuit according to ~~one of the claims 1 to 7, characterised in that~~ claim 1, wherein the modifying means [[(3)]] comprises a frequency range selective gain control for decreasing the gain of the higher frequency range of the audio signal corresponding to a decrease in ~~the~~ a volume setting of the audio signal.

9. (Currently Amended) ~~Control~~ A control circuit according to ~~one of the claims 1 to 8, characterised in that~~ claim 1, wherein the modifying means [[(3)]] comprises a frequency range selective gain control for decreasing the gain of the lower frequency range of the audio signal corresponding to an increase in the level of the audio signal.

10. (Currently Amended) ~~Control~~ A control circuit according to claim 8, ~~characterised in that~~ wherein the gain of the modifying means [[(3)]] in the lower frequency range of the audio signal is independent of ~~the~~ a volume setting of the audio signal.

11. (Currently Amended) ~~Control~~ A control circuit according to claim 10, ~~characterised in that~~ wherein the gain of the modifying means [[(3)]] in the lower frequency range of the audio signal has a constant value or decreases for a decreasing level of the audio signal, the gain in the lower frequency range being higher than the gain for the higher frequency range of the audio signal.

12. (Currently Amended) ~~Control~~ A control circuit according to ~~one of the claims 1 to 11, characterised in that a~~ claim 1, wherein the level of the audio signal is determined according to ~~the~~ electro-mechanical properties of the electrodynamic transducer [[(4)]].

13. (Currently Amended) ~~Control~~ A control circuit according to ~~one of the claims1 to 12, characterised in that the~~ claim 1, wherein a cut-off steepness of a filter and/or of a frequency range progresses approximately with the square of the frequency.

14. (Currently Amended) ~~Method~~ A method for a signal strength information dependent frequency response adaptation of an audio signal for an electro-dynamic transducer [[(4)]], the method comprising ~~the following steps~~:

- determining a signal strength information according to ~~the~~ a level of the audio signal, and
- ~~frequency~~ selectively modifying a frequency of the audio signal in response to the signal strength information such[[,]] that the electro-dynamic transducer [[(4)]] converts the audio signal into a low distortion sound signal for high levels of [[an]] the audio signal and ~~with~~ has a flat frequency response for low levels of [[an]] the audio signal,

~~whereby~~ wherein a lower frequency range of the audio signal is modified with a gain that is different [[to]] than a gain of a higher frequency range of the audio signal, and a cutoff frequency~~(f_{g1}, f_{g2}, f_{g3}, f_{g4}, f_{g5})~~ separating the lower frequency range from the higher frequency range is shifted towards higher values for an increasing level of the audio signal and towards lower values for a decreasing level of the audio signal.

15. (Currently Amended) ~~Method~~ A method according to claim 14, ~~characterised in that the method comprises a step for defining~~ comprising determining the level of the audio signal ~~by reading~~ based on a volume setting.

16. (Currently Amended) ~~Method~~ A method according to claim 14, ~~characterised in that the method comprises a step~~ comprising determining the level of the audio signal from a current amplitude or from a current energy content of the audio signal with respect to ~~the~~ a full frequency range of the audio signal.

17. (Currently Amended) ~~Method~~ A method according to claim 14, ~~characterised in that the method comprises a step for~~ comprising determining the level of the audio signal from a current amplitude or from a current energy content of a lower frequency range of the audio signal.

18. (Currently Amended) ~~Method~~ A method according to claim 14, ~~characterised in that the method comprises a step for~~ comprising shifting the cut-off frequency separating the lower frequency range from the higher frequency range proportional to ~~the~~ a square root of a peak amplitude of the audio signal ~~peak amplitude~~.

19. (Currently Amended) ~~Method~~ A method according to claim 14, ~~characterised in that the method comprises a step for~~comprising shifting the cut-off frequency separating the lower frequency range from the higher frequency range proportional to ~~the~~ a square root of ~~the~~ a root mean square value of a frequency of the audio ~~frequency~~ signal.

20. (Currently Amended) ~~Method~~ A method according to ~~one of the claims 14 to 19, characterised in that the method comprises a step for~~ claim 14, comprising decreasing the gain of the higher frequency range of the audio signal corresponding to a decrease in ~~the~~ a volume setting of the audio signal.

21. (Currently Amended) ~~Method~~ A method according to ~~one of the claims 14 to 20, characterised in that the method comprises a step for~~ claim 14, comprising decreasing the gain of the lower frequency range of the audio signal corresponding to an increase in the level of the audio signal.

22. (Currently Amended) ~~Method~~ A method according to claim 20, ~~characterised in that~~ wherein the method comprises a step for controlling the gain in the lower frequency range of the audio signal independent of the volume setting.

23. (Currently Amended) ~~Method~~ A method according to claim 22, ~~characterised in that~~ wherein the method comprises a step for adjusting the gain in the lower frequency range of the audio signal at a constant value or by decreasing the value of the gain for an increasing level of the audio signal, whereby the gain of the lower frequency range of the audio signal is adjusted to a higher value than that for the higher frequency range of the respective audio signal.

24. (Currently Amended) ~~Method~~ A method according to one of the ~~claims~~ claim 14 ~~to 23, characterised in that~~ wherein the method comprises a step for weighting the level and the frequency distribution of the audio signal according to the electro-mechanical properties of the electro- dynamic transducer (4).

25. (Currently Amended) ~~Method~~ A method according to ~~one of the claims 14 to 24, characterised in that the method comprises a step for~~ claim 14, comprising controlling ~~the~~ a transition in the gain from the lower frequency range to the higher frequency range such[[,]] that ~~the~~ a steepness of the transition is set approximately proportional to ~~the~~ a square of the frequency.

26. (Currently Amended) ~~Computer~~ A computer software product for use on an audio system, ~~implementing a control circuit according to one of the claims 1 to 13 by processing a method according to one of the claims 14 to 25 when being stored in a storage~~

~~means and being executed by a processing means of the audio system.~~ the computer program product comprising:

a computer readable medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code configured to determine a signal strength information according to a level of the audio signal, and

computer readable program code configured to selectively modify a frequency of the audio signal in response to the signal strength information such that the electro-dynamic transducer converts the audio signal into a low distortion sound signal for high levels of the audio signal and has a flat frequency response for low levels of the audio signal,

wherein a lower frequency range of the audio signal is modified with a gain that is different than a gain of a higher frequency range of the audio signal, and a cutoff frequency separating the lower frequency range from the higher frequency range is shifted towards higher values for an increasing level of the audio signal and towards lower values for a decreasing level of the audio signal.

27. (Currently Amended) ~~Mobile~~ A mobile telecommunication terminal comprising a control circuit ~~according to one of the claims 1 to 13 for a level dependent frequency selective adaptation of an audio signal to the electro-mechanical properties of an electrodynamic transducer operated by the mobile terminal.~~ for a signal strength information dependent frequency response adaptation of an audio signal for an electrodynamic transducer, the control circuit of the mobile telecommunications terminal comprising:

- a signal strength information determination means for determining a signal strength information according to a level of the audio signal, and
- a frequency modifying means for selectively modifying the audio signal in response to the signal strength information such that the electrodynamic transducer converts the audio signal into a low distortion sound signal for high levels of the audio signal and has a flat frequency response for low levels of the audio signal,

wherein a lower frequency range of the audio signal is modified with a gain that is different than a gain of a higher frequency range of the audio signal, and a cutoff frequency separating

the lower frequency range from the higher frequency range is shifted towards higher values for an increasing level of the audio signal and towards lower values for a decreasing level of the audio signal.

28. (Canceled)